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### APPEAL BRIEF

Applicant : Don Kennard  
 App. No : 10/691,470  
 Filed : October 22, 2003  
 For : IMMEDIATE PROVISIONAL  
 IMPLANT  
 Examiner : Singh, Sunil K.  
 Art Unit : 3732

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/Rabinder N. Narula/

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#### Mail Stop Appeal Brief-Patents

Commissioner for Patents

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Sir:

In accordance with the Notice of Appeal filed, Applicant submits this Appeal Brief.

### TABLE OF CONTENTS

I.	REAL PARTY IN INTEREST .....	2
II.	RELATED APPEALS AND INTERFERENCES .....	2
III.	STATUS OF CLAIMS .....	2
IV.	STATUS OF AMENDMENTS .....	2
V.	SUMMARY OF CLAIMED SUBJECT MATTER.....	2
VI.	GROUND OF REJECTION TO BE REVIEWED ON APPEAL.....	4
VII.	ARGUMENT .....	5
VIII.	CLAIMS APPENDIX.....	10
IX.	EVIDENCE APPENDIX.....	13
X.	RELATED PROCEEDINGS APPENDIX.....	14

### **I. REAL PARTY IN INTEREST**

The real party in interest in the present application is Nobel Biocare Services AG.

### **II. RELATED APPEALS AND INTERFERENCES**

No related appeals, interferences, or court proceedings are currently pending.

### **III. STATUS OF CLAIMS**

Claims 39-57 and 62 are currently pending in the application and are the subject of this appeal. Claims 1-38, 58-61 and 63-69 were previously cancelled. All of the pending claims were rejected in the final Office Action having a notification date of March 3, 2010. The pending claims are listed in the Claims Appendix.

Claims 39, 40, 43, 44, 48, 56, 57 and 62 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,520,540 issued to Nardi. Claims 41, 42, 45-47, 49-52 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nardi in view of U.S. Patent No. 5,074,790 issued to Bauer. Claims 53-55 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nardi in view of U.S. Patent No. 3,466,748 issued to Christensen.

### **IV. STATUS OF AMENDMENTS**

No amendments are outstanding.

### **V. SUMMARY OF CLAIMED SUBJECT MATTER**

The present application includes one independent claim, Claim 39. A concise explanation of Claim 39 with reference to the specification by line and page number and drawings of the application as filed as required by 37 C.F.R. § 41.37(c)(1)(v). These citations are set forth to illustrate specific examples and embodiments of the recited claim language and not to limit the claims.

***Claim 39***

Claim 39 is directed to a dental implant and includes at least the following:

An immediate provisional dental implant (10) elongated along an implant axis, comprising (page 8, lines 1-20 and Figure 2A reproduced below):

an abutment (16) adapted to bond with a dental prosthesis (page 11, lines 1-10) ;

a bendable neck segment (14) connected to the abutment (16) (page 10, line 29 to page 11, line 3 and page 11, lines 1-5);

a body segment (12) connected to the bendable neck segment (14), the body segment (12) having threads (60) extending helically about the implant axis, the thread diameter tapering non-linearly from a maximum adjacent the neck segment to a minimum at a distal end (page 9, lines 28-30);

a torque engagement segment (18) positioned below the bendable neck segment (14) and above the body segment (12), said torque segment (18) configured to engage a torque-imparting tool, said torque segment (18) comprising at least one flat surface on an outer surface of the torque segment (18) (page 10, line 29 to page 11 line 3);

wherein the abutment (16), bendable neck segment (14), body segment (12) and torque engagement segment (18) form a monolithic structure (page 11, line 16-20) and the bendable neck segment (14) is sufficiently bendable such that while the body segment (12) is positioned within a patient's jawbone the bendable neck segment (14) can be bent to adjust the angle of the abutment (16) (page 1, lines 3-6).

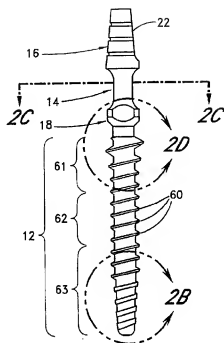


FIG. 2A

## GROUND OF REJECTION TO BE REVIEWED ON APPEAL

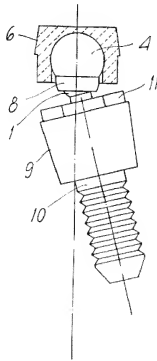
As the grounds of rejection for review:

1. Whether Claims 39, 40, 43, 44, 48, 56, 57 and 62 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 5,520,540 issued to Nardi?
2. Whether Claims 41, 42, 45-47, 49-52 are unpatentable under 35 U.S.C. § 103(a) over Nardi in view of U.S. Patent No. 5,074,790 issued to Bauer?
3. Whether Claims 53-55 are unpatentable under 35 U.S.C. § 103(a) over Nardi in view of U.S. Patent No. 3,466,748 issued to Christensen?

## VI. ARGUMENT

### A. The Obviousness Rejection of Claims 39, 40, 43, 44, 48, 56, 57 and 62 over Nardi Is Incorrect

Claims 39, 40, 43, 44, 48, 56, 57 and 62 stand rejected as being obvious over Nardi. Nardi discloses a two piece ball (1) and socket (4) structure, where the ball (1) is connected to a neck segment, which is, in turn, connected to a nut (11). The nut (11) is connected to a threaded stem (10). See *Nardi*, 3:15-33; 3:54-55; and Fig. 5 (reproduced below).



In rejecting Claim 39, the Examiner equates the connecting element (socket) 4 with the “abutment adapted to bond with a dental prosthesis,” which is claimed in Claim 39. *See* Final Office Action page 2. However, Claim 39 also recites that “the abutment, bendable neck segment, body segment and torque engagement segment form a **monolithic structure**.” The Examiner admits that Nardi does not disclose the claimed monolithic structure. *See* Final Office Action page 3, lines 9-10. However, the Examiner maintains that “[i]t would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Nardi to make monolithic, since it has been held that it involves no invention to cast in one piece an article which has formerly been cast in multiple pieces and put together and that such modification involves only routine skill in the art.” Final Office Action page 3, lines 10-14 (citing *Howard v. Detroit Stove Works*, 150 U.S. 164 (1993)). Applicant respectfully disagrees.

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reasons why the claimed invention would have been obvious. *See* MPEP 2141. Such reasons should be made explicit and cannot be sustained by mere conclusory statements. *Id.*

In the present case, the Examiner simply concludes, without analysis, that in all situations making an article consisting of multiple pieces into one piece is obvious. This is improper. At the very least, the Examiner needs to articulate a reason why the factual situation and reasoning in *Howard* is similar to the present case. *See* MPEP 2144.04. Moreover, the citation of case law does not replace the need to articulate a reason why one of skill in the art would find it obvious to make the suggested modification to the art of record (Nardi). *Id.*

This particular situation is a perfect example why such conclusory reasoning is not allowed. It would not have been obvious to one of skill in the art to modify Nardi to be “monolithic.” Specifically, the entire point of the ball and socket arrangement of Nardi is to provide a quick coupling and snap fit between the ball (1) and socket (4) that allows the two elements to freely pivot. *Nardi* Col. 3 lines 30-32. Thus, the Examiner is essentially concluding that it would be obvious to make the snap-fit, pivoting arrangement of Nardi into a solid, one piece configuration. However, the Examiner has not provided any reason why one of skill in the art would be motivated to make such a modification. Indeed, the proposed modification destroys the central purpose of Nardi, which is to provide such a snap-fit and pivoting arrangement. *See*

*e.g.*, Nardi Abstract lines 1-9. If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *See* MPEP 2143.01 (*citing In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

In addition to the above-argument, Applicant also respectfully submits that the Examiner has not established a *prima facie* case of obviousness because the Examiner has not addressed the limitation that “the bendable neck segment is sufficiently bendable such that while the body segment is positioned within a patient’s jawbone the bendable neck segment can be bent to adjust the angle of the abutment.” At page 5 of the Final Office Action, the Examiner states that “[f]lexibility is a relative term and anything will flex/bend if enough pressure is applied to it” and concludes that Nardi discloses a “bendable” neck.

However, as noted above, Claim 39 does limit “bendable” by stating that bendable neck segment is “sufficiently bendable such that while the body segment is positioned within a patient’s jawbone the bendable neck segment can be bent to adjust the angle of the abutment.” This limitation is simply ignored in the Final Office Action and, for at least this reason, the Examiner’s rejection of Claim 39 is improper because the Examiner has not properly ascertained the differences between the claimed invention and the prior art. *See* MPEP 2141, Section II. Perhaps the reason for the Examiner’s omission is that there is clearly no reason for one of skill in the art to make the neck of Nardi sufficiently bendable such that it could be adjusted while positioned with a jawbone. Specifically, such a modification would harm the swiveling arrangement of Nardi by interfering with the movement of the two parts rendering it unsuitable for its intended purpose.

**B. The Obviousness Rejection of Claims 41, 42, 45-47, 49-52 over Nardi in View of Bauer Is Incorrect**

Claims 41, 42, 45-47, 49-52 depend upon independent Claim 39 and, for at least this reason; these claims are also in condition for allowance. The Examiner cites Bauer for the limitations directed to the threads in these claims. However, Bauer does not cure the defect in the rejection of the independent claim over Nardi.

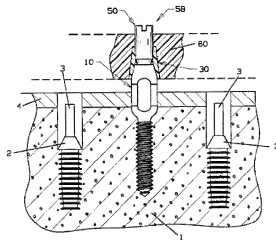
Indeed, Applicant respectfully notes that while Bauer discloses a dental implant with a “bending zone” there is no “a torque engagement segment positioned below the bendable neck

segment and above the body segment.” Moreover, a rejection over Bauer has already been overcome. *See* Final Rejection dated March 20, 2009.

Further, it would not be obvious for a person of ordinary skill in the art to combine Bauer with Nardi to result in the claimed invention. As discussed above, Nardi is a two piece ball and socket assembly. It would not be obvious to modify Nardi into a one piece assembly in view of Bauer, because Nardi is inherently a two piece assembly and to modify Nardi into a one-piece configuration would destroy the intended purpose of this reference.

**C. The Obviousness Rejection of Claims 53-55 over Nardi in View of Christensen Is Incorrect**

As discussed above, it would not be obvious for a person of ordinary skill in the art to modify Nardi to meet the limitations of the claimed invention. Christensen does not cure this problem, and Examiner does not rely on Christensen to meet the “bendable” limitation. Indeed, there is no suggestion in Christensen that the disclosed device can be “bendable”. *See* Christensen, Fig. 6 (reproduced below).



Instead, the Examiner relies upon Christensen to the limitations in Claims 53-55. Accordingly, Christensen does not cure the defect in the rejection of independent Claim 39 and, because Claims 53-55 depend upon Claim 39, these claims are also in condition for allowance.



Docket No.: NOBELB.063DV1  
Appl. No.: 10/691,470  
Filing Date: October 22, 2003

**Customer No.: 20995**

**D. Conclusion**

For at least the reasons explained above, Applicant respectfully submits that the rejections of Claims 39-57 and 62 are improper and should be reversed. Please charge any additional fees that may be required now or in the future to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: July 6, 2010

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## VII. CLAIMS APPENDIX

1-38. (Canceled)

39. An immediate provisional dental implant elongated along an implant axis, comprising:

an abutment adapted to bond with a dental prosthesis;

a bendable neck segment connected to the abutment;

a body segment connected to the bendable neck segment, the body segment having threads extending helically about the implant axis, the thread diameter tapering non-linearly from a maximum adjacent the neck segment to a minimum at a distal end;

a torque engagement segment positioned below the bendable neck segment and above the body segment, said torque segment configured to engage a torque-imparting tool, said torque segment comprising at least one flat surface on an outer surface of the torque segment;

wherein the abutment, bendable neck segment, body segment and torque engagement segment form a monolithic structure and the bendable neck segment is sufficiently bendable such that while the body segment is positioned within a patient's jawbone the bendable neck segment can be bent to adjust the angle of the abutment.

40. The immediate provisional dental implant of Claim 39, wherein the threaded body segment comprises an upper flared section proximal to the neck segment, an intermediate section and a tapered lower section distal from the neck segment, the lower section having a smaller angle of taper as compared to the upper section.

41. The immediate provisional dental implant of Claim 40, wherein threads of the upper flared section define a taper angle between about 6° and 14°.

42. The immediate provisional dental implant of Claim 40, wherein threads of the tapered lower section define a taper angle between about 3° and 7°.

43. The immediate provisional dental implant of Claim 40, wherein the neck segment is more narrow than both of the upper flared section of the body segment and the abutment.

44. The immediate provisional dental implant of Claim 40, wherein threads of the intermediate section have a constant diameter.

45. The immediate provisional dental implant of Claim 39, wherein the thread diameter is within the range of about 1.0 mm and 3.5 mm.

46. The immediate provisional dental implant of Claim 39, wherein the thread diameter is within the range of about 1.0 mm and 3.0 mm.

47. The immediate provisional dental implant of Claim 39, wherein the body segment is at least about 12 mm in length.

48. The immediate provisional dental implant of Claim 39, wherein a length of the body segment is approximately equal to the thickness of the cortical layer of the bone in which the implant is to be emplaced.

49. The immediate provisional dental implant of Claim 39, wherein the neck segment and abutment form an extension from the body segment with a length of greater than about 3 mm.

50. The immediate provisional dental implant of Claim 49, wherein the neck segment and abutment form an extension from the body segment with a length of greater than about 5 mm.

51. The immediate provisional dental implant of Claim 39, having a total length along the implant axis of greater than 17 mm.

52. The immediate provisional dental implant of Claim 51, having a total length along the implant axis of greater than 20 mm.

53. The immediate provisional dental implant of Claim 39, having a thread depth tapering from a maximum thread depth adjacent the neck segment to a minimum thread depth adjacent the distal end.

54. The immediate provisional dental implant of Claim 53, wherein the maximum thread depth is between about 0.5 mm and 0.7 mm.

55. The immediate provisional dental implant of Claim 53, wherein a thread pitch of the body segment is in the range 0.8 mm to 1.8 mm.

56. The immediate provisional dental implant of Claim 39, comprising a plurality of flat facets on the outer surface of the neck segment.

57. The immediate provisional dental implant of Claim 39, consisting of a material selected from the group consisting of titanium and alloys of titanium.

58-61. (Canceled)

Docket No.: NOBELB.063DV1

**Customer No.: 20995**

Appl. No.: 10/691,470

Filing Date: October 22, 2003

62. The immediate provisional dental implant of Claim 39, wherein said torque engagement segment further comprises a plurality of flat surfaces configured to engage a wrench.

63-69. (Canceled)

Docket No.: NOBELB.063DV1

Customer No.: 20995

Appl. No.: 10/691,470

Filing Date: October 22, 2003

#### **VIII. EVIDENCE APPENDIX**

None.

Docket No.: NOBELB.063DV1

Customer No.: 20995

Appl. No.: 10/691,470

Filing Date: October 22, 2003

#### **IX. RELATED PROCEEDINGS APPENDIX**

None.

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